

Appl. No. 09/852,889
Atty. Docket No. 8550
Amdt. dated March 29, 2004
Reply to Final Office Action of January 27, 2004
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An environmentally degradable, highly attenuated fiber produced by melt spinning a composition comprising:

- a. destructurized starch,
- b. a biodegradable thermoplastic polymer having a molecular weight of less than ~~500,000~~ 400,000 g/mol; and
- c. a plasticizer

Claim 2 (original): The highly attenuated fiber of Claim 1 wherein the destructurized starch is present in an amount of from about 5% to about 85%.

Claim 3 (original): The highly attenuated fiber of Claim 1 wherein the biodegradable thermoplastic polymer is present in an amount of from about 5% to about 90%.

Claim 4 (original): The highly attenuated fiber of Claim 1 wherein the total plasticizer amount is from about 2% to about 70%.

Claim 5 (original): The highly attenuated fiber of Claim 1 wherein more than one biodegradable thermoplastic polymer is present.

Claim 6 (original): The highly attenuated fiber of Claim 1 wherein the biodegradable thermoplastic polymer is a homopolymer or copolymer of crystallizable polylactic acid having a melting temperature of from about 160°C to about 175°C.

Claim 7 (original): The highly attenuated fiber of Claim 5 wherein the first biodegradable thermoplastic polymer is a homopolymer or copolymer of crystallizable polylactic acid having a melting temperature of from about 160°C to about 175°C and the second biodegradable thermoplastic polymer is another polylactic acid having lower crystallinity and melting temperature than the first polylactic acid.

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Claim 8 (original): The highly attenuated fiber of Claim 6 wherein a second biodegradable thermoplastic polymer is selected from a group consisting of diacid/diol aliphatic polyesters, aliphatic/aromatic copolyesters, and combinations thereof.

Claim 9 (original): The highly attenuated fiber of Claim 1 wherein the fiber has a diameter of less than 200 micrometers.

Claim 10 (original): The highly attenuated fiber of Claim 1 wherein the starch is not substituted and has a reduced molecular weight of from about 30,000 g/mol to about 500,000 g/mol.

Claim 11 (original): The highly attenuated fiber of Claim 1 wherein the fiber is thermally bondable.

Claim 12 (withdrawn): A nonwoven web comprising the highly attenuated fibers of Claim 11.

Claim 13 (withdrawn): A nonwoven web wherein the highly attenuated fibers of Claim 11 are blended with other synthetic or natural fibers and bonded together.

Claim 14 (withdrawn): A disposable article comprising the nonwoven web of Claim 12.

Claim 15 (currently amended): An environmentally degradable, highly attenuated fiber produced by melt spinning a composition comprising:

- a. from about 5% to about 80% of destructureized starch,
 - b. from about 15% to about 90% of a biodegradable thermoplastic polymer having a molecular weight of from about 5,000 g/mol to about ~~500,000~~ 400,000 g/mol, and
 - c. from about 2% to about 70% of a plasticizer,
- wherein thermoplastic polymer microfibrils are formed within the starch matrix in the environmentally degradable, highly attenuated fiber.

Claim 16 (original): The highly attenuated fiber of Claim 15 wherein the thermoplastic polymer microfibrils have a diameter of from about 0.01 micrometers to about 10 micrometers. wherein the diameter of the finely attenuated fiber is less than about 200 micrometers.

Claim 17 (original): The highly attenuated fiber of Claim 16 wherein the diameter of the finely attenuated fiber is less than about 200 micrometers.

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Claim 18 (original): The highly attenuated fiber of Claim 15 wherein more than one biodegradable thermoplastic polymer is present.

Claim 19 (original): The highly attenuated fiber of Claim 16 wherein the biodegradable thermoplastic polymer is a homopolymer or copolymer of crystallizable polylactic acid having a melting temperature of from about 160°C to about 175°C.

Claim 20 (original): The highly attenuated fiber of Claim 18 wherein the first biodegradable thermoplastic polymer is a homopolymer or copolymer of crystallizable polylactic acid having a melting temperature of from about 160°C to about 175°C and the second biodegradable thermoplastic polymer is another polylactic acid having a lower melting temperature and crystallinity than the first polylactic acid.

Claim 21 (original): The highly attenuated fiber of Claim 19 wherein a second biodegradable thermoplastic polymer is selected from a group consisting of diacid/diol aliphatic polyesters, aliphatic/aromatic copolyesters, and combinations thereof.

Claim 22 (withdrawn): A nonwoven web comprising environmentally degradable, highly attenuated fibers comprising destructure starch, a biodegradable thermoplastic polymer having a molecular weight of from about 5,000 g/mol to about 500,000 g/mol, and a plasticizer.

Claim 23 (withdrawn): A nonwoven web wherein the highly attenuated fibers of Claim 22 are blended with other synthetic or natural fibers and bonded together.

Claim 24 (withdrawn): A disposable article comprising the nonwoven web of Claim 22.